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LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CEABA-VTB'

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L15
             O FILE CEABA-VTB
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CEN'
             O FILE CEN
L16
L17
             O FILE CIN
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CONFSCI'
             O FILE CONFSCI
L18
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CROPB'
L19
             O FILE CROPB
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CROPU'
             O FILE CROPU
L20
L21
             O FILE DISSABS
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'DGENE'
             O FILE DGENE
L22
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'DRUGB'
L23
             O FILE DRUGB
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'DRUGMONOG2'
L24
             O FILE DRUGMONOG2
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'IMSDRUGNEWS'
             O FILE IMSDRUGNEWS
L25
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'DRUGU'
             O FILE DRUGU
L26
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'IMSRESEARCH'
L27
             O FILE IMSRESEARCH
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'EMBAL'
             O FILE EMBAL
L28
L29
             O FILE EMBASE
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'ESBIOBASE'
L30
             O FILE ESBIOBASE
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'FEDRIP'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'ONOTOXIN? (S) REFOLD?'
L31
             O FILE FEDRIP
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'FOMAD'
L32
             O FILE FOMAD
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'FOREGE'
             0 FILE FOREGE
L33
             0 FILE FROSTI
L34
             O FILE FSTA
L35
             O FILE GENBANK
L36
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'HEALSAFE'
L37
             O FILE HEALSAFE
             O FILE IFIPAT
L38
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L39
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L40
             O FILE JICST-EPLUS
L41
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L42
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L43
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L45
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L46
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L49
             O FILE PASCAL
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L50
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L51
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L53
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L54
             O FILE PHIN
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L55
             O FILE RDISCLOSURE
L56
             O FILE SCISEARCH
L57
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             O FILE SYNTHLINE
L58
             O FILE TOXCENTER
L59
             O FILE USPATFULL
L60
L61
             O FILE USPAT2
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             O FILE VETB
L62
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             O FILE VETU
L63
             O FILE WPIDS
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L65
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'APOLLIT'
             O FILE APOLLIT
L66
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'AQUIRE'
             O FILE AOUIRE
L67
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'BABS'
L68
             O FILE BABS
L69
             O FILE CAOLD
             O FILE CBNB
L70
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CERAB'
             O FILE CERAB
L71
L72
             O FILE COMPENDEX
             O FILE COPPERLIT
L73
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CORROSION'
             O FILE CORROSION
L74
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'ENCOMPLIT2'
             O FILE ENCOMPLIT2
L75
L76
             O FILE INSPEC
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'INSPHYS'
L77
             O FILE INSPHYS
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             O FILE INVESTEXT
L78
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             O FILE IPA
L79
             O FILE METADEX
L80
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L81
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             O FILE RUSSCI
L84
L85
             O FILE STANDARDS
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             O FILE TULSA
L86
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'TULSA2'
             0 FILE TULSA2
L87
L88
             O FILE USAN
             O FILE WELDASEARCH
L89
L90
             O FILE WSCA
TOTAL FOR ALL FILES
             0 ?CONOTOXIN? (S) REFOLD? AND (DETERGENT OR SURFACTANT? OR NON-ION
L91
               IC (W) DETERGENT? OR TWEEN-20 OR TWEEM-80 OR TRITON?) AND DISULF
               IDE?
Left truncation is not valid in the specified search field in the
specified file. The term has been searched without left truncation.
Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID'
```

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would be searched as 'FLAVONOID.'

interpret the truncation symbol as being at the beginning of a term. Implied proximity is used in search fields indexed as single words, for example, the Basic Index.

```
=> s ?CONOTOXIN? (S) ?fOLD? AND (DETERGENT OR SURFACTANT? OR NON-IONIC (W) DETERGENT? OR
TWEEN-20 OR TWEEM-80 OR TRITON?) AND DISULFIDE?
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'ADISCTI'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'ADISCTI'
L92
             O FILE ADISCTI
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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'ADISINSIGHT'
             O FILE ADISINSIGHT
L93
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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'ADISNEWS'
             O FILE ADISNEWS
L94
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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'AGRICOLA'
             O FILE AGRICOLA
L95
L96
             O FILE ANABSTR
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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'AQUASCI'
L97
             O FILE AQUASCI
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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'BIOBUSINESS'
L98
             O FILE BIOBUSINESS
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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'BIOCOMMERCE'
L99
             O FILE BIOCOMMERCE
L100
             1 FILE BIOSIS
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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'BIOTECHDS'
L101
             O FILE BIOTECHDS
L102
             0 FILE BIOTECHNO
L103
             0 FILE CABA
L104
             O FILE CANCERLIT
L105
             1 FILE CAPLUS
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CEABA-VTB'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'CEABA-VTB'
L106
             O FILE CEABA-VTB
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CEN'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'CEN'
             O FILE CEN
L107
L108
             O FILE CIN
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CONFSCI'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'CONFSCI'
             O FILE CONFSCI
L109
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CROPB'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'CROPB'
L110
             O FILE CROPB
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'CROPU'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'CROPU'
L111
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L112
             O FILE DISSABS
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L113
             O FILE DGENE
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L114
             O FILE DRUGB
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L115
             O FILE DRUGMONOG2
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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'IMSDRUGNEWS'
L116
             O FILE IMSDRUGNEWS
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LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'DRUGU'

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LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'DRUGU'
L117
             O FILE DRUGU
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'IMSRESEARCH'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'IMSRESEARCH'
L118
             O FILE IMSRESEARCH
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'EMBAL'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'EMBAL'
L119
             O FILE EMBAL
             1 FILE EMBASE
L120
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'ESBIOBASE'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'ESBIOBASE'
L121
             1 FILE ESBIOBASE
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'FEDRIP'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'FEDRIP'
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'ONOTOXIN? (S) ?FOLD?'
L122
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LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'FOMAD'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'FOMAD'
L123
             O FILE FOMAD
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'FOREGE'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'FOREGE'
             O FILE FOREGE
L124
L125
             0 FILE FROSTI
             O FILE FSTA
L126
L127
             O FILE GENBANK
LEFT TRUNCATION IGNORED FOR '?CONOTOXIN?' FOR FILE 'HEALSAFE'
LEFT TRUNCATION IGNORED FOR '?FOLD?' FOR FILE 'HEALSAFE'
L128
             O FILE HEALSAFE
L129
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L132
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L181 0 FILE WSCA

TOTAL FOR ALL FILES

L182 25 ?CONOTOXIN? (S) ?FOLD? AND (DETERGENT OR SURFACTANT? OR NON-IONI C (W) DETERGENT? OR TWEEN-20 OR TWEEM-80 OR TRITON?) AND DISULFI

DE?

Left truncation is not valid in the specified search field in the specified file. The term has been searched without left truncation. Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID' would be searched as 'FLAVONOID.'

If you are searching in a field that uses implied proximity, and you used a truncation symbol after a punctuation mark, the system may interpret the truncation symbol as being at the beginning of a term. Implied proximity is used in search fields indexed as single words, for example, the Basic Index.

=> d 1182 1-25 ibib abs

L182 ANSWER 1 OF 25 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 2003:202756 BIOSIS DOCUMENT NUMBER: PREV200300202756

TITLE: Detergent-assisted oxidative folding of

delta-conotoxins.

AUTHOR(S): dela Cruz, R.; Whitby, F. G.; Buczek, O.; Bulaj, G.

[Reprint Author]

CORPORATE SOURCE: University of Utah, Salt Lake City, UT, 84112, USA

SOURCE: Journal of Peptide Research, (April 2003) Vol. 61, No. 4,

pp. 202-212. print.

ISSN: 1397-002X (ISSN print).

DOCUMENT TYPE: Article LANGUAGE: English

ENTRY DATE: Entered STN: 23 Apr 2003

Last Updated on STN: 23 Apr 2003

AB Conotoxins comprise a diverse group of disulfide-rich peptides found in venoms of predatory Conus species. The native conformation of these peptides is marginally stable in comparison with alternative conformations, often resulting in low folding yields. The oxidative folding of hydrophobic delta-conotoxins was found to produce less than 1% of the native peptide (Bulaj, G. et al. (2001) Biochemistry 40, 13201). In order to identify factors that might improve folding yields, we screened a number of additives including water-soluble polymers, detergents and osmolytes for their ability to increase steady-state accumulation of the native deltaconotoxin PVIA. The presence of a non-ionic detergent Tween and low temperature appeared to be the most effective factors in improving the oxidative folding. detergent was also effective in promoting folding of other hydrophobic delta-conotoxins. Based on our findings, we discuss a possible mechanism for detergent-assisted folding and

the general applicability of this mechanism to facilitating the proper folding of hydrophobic, cysteine-rich peptides.

L182 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:237390 CAPLUS

DOCUMENT NUMBER: 139:175022

TITLE: Detergent-assisted oxidative folding

of  $\delta$ - conotoxins

AUTHOR(S): DeLa Cruz, R.; Whitby, F. G.; Buczek, O.; Bulaj, G. CORPORATE SOURCE: Department of Biology, University of Utah, Salt Lake

City, UT, 84112, USA

SOURCE: Journal of Peptide Research (2003), 61(4), 202-212

CODEN: JPERFA; ISSN: 1397-002X

PUBLISHER: Blackwell Munksquard

DOCUMENT TYPE: Journal

LANGUAGE: English

Conotoxins comprise a diverse group of disulfide-rich peptides found in venoms of predatory Conus species. The native conformation of these peptides is marginally stable in comparison with alternative conformations, often resulting in low folding yields. The oxidative folding of hydrophobic  $\delta$ - conotoxins was found to produce less than 1% of the native peptide [Bulaj, G. et al. (2001) Biochem. 40, 13201]. In order to identify factors that might improve folding yields, the authors screened a number of additives including water-soluble polymers, detergents and osmolytes for their ability to increase steady-state accumulation of the native  $\delta$ conotoxin PVIA. The presence of a non-ionic detergent Tween and low temperature appeared to be the most effective factors in improving the oxidative folding. The detergent was also effective in promoting folding of other hydrophobic  $\delta$ - conotoxins. Based on our findings, the authors discuss a possible mechanism for detergent-assisted folding and the general applicability of this mechanism to facilitating the proper folding of hydrophobic, cysteine-rich peptides.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L182 ANSWER 3 OF 25 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.

on STN

ACCESSION NUMBER: 2003130601 EMBASE

TITLE: Detergent-assisted oxidative folding of

 $\delta$ - conotoxins.

AUTHOR: DeLa Cruz R.; Whitby F.G.; Buczek O.; Bulaj G.

CORPORATE SOURCE: G. Bulaj, University of Utah, Salt Lake City, UT 84112,

United States

SOURCE: Journal of Peptide Research, (1 Apr 2003) 61/4 (202-212).

Refs: 46

ISSN: 1397-002X CODEN: JPERFA

COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 029 Clinical Biochemistry

LANGUAGE: English SUMMARY LANGUAGE: English

Conotoxins comprise a diverse group of disulfide-rich ABpeptides found in venoms of predatory Conus species. The native conformation of these peptides is marginally stable in comparison with alternative conformations, often resulting in low folding yields. The oxidative folding of hydrophobic  $\delta$ conotoxins was found to produce less than 1% of the native peptide [Bulaj, G. et al. (2001) Biochemistry 40, 13201]. In order to identify factors that might improve folding yields, we screened a number of additives including water-soluble polymers, detergents and osmolytes for their ability to increase steady-state accumulation of the native  $\delta$ - conotoxin PVIA. The presence of a nonionic detergent Tween and low temperature appeared to be the most effective factors in improving the oxidative folding. The detergent was also effective in promoting folding of other hydrophobic  $\delta$ - conotoxins. Based on our findings, we discuss a possible mechanism for detergent-assisted folding and the general applicability of this mechanism to facilitating the proper folding of hydrophobic, cysteine-rich peptides.

L182 ANSWER 4 OF 25 Elsevier BIOBASE COPYRIGHT 2004 Elsevier Science B.V. on STN

ACCESSION NUMBER: 2003080944 ESBIOBASE

TITLE: Detergent-assisted oxidative folding

of  $\delta$ - conotoxins

AUTHOR: DeLa Cruz R.; Whitby F.G.; Buczek O.; Bulaj G.

CORPORATE SOURCE: G. Bulaj, University of Utah, Salt Lake City, UT

84112, United States.

SOURCE: Journal of Peptide Research, (01 APR 2003), 61/4

(202-212), 46 reference(s) CODEN: JPERFA ISSN: 1397-002X

DOCUMENT TYPE:

COUNTRY:

Journal; Article United Kingdom

LANGUAGE:
SUMMARY LANGUAGE:

English English

AB Conotoxins comprise a diverse group of disulfide-rich

peptides found in venoms of predatory Conus species. The native conformation of these peptides is marginally stable in comparison with

alternative conformations, often resulting in low folding

yields. The oxidative **folding** of hydrophobic  $\delta$ -

conotoxins was found to produce less than 1% of the native

peptide [Bulaj, G. et al. (2001) Biochemistry 40, 13201]. In order to

identify factors that might improve folding yields, we screened

a number of additives including water-soluble polymers, detergents and osmolytes for their ability to increase

steady-state accumulation of the native  $\delta$ - conotoxin PVIA.

The presence of a non-ionic detergent Tween

and low temperature appeared to be the most effective factors in

improving the oxidative folding. The detergent was

also effective in promoting folding of other hydrophobic

 $\delta$ - conotoxins. Based on our findings, we discuss a

possible mechanism for detergent-assisted folding and

the general applicability of this mechanism to facilitating the proper folding of hydrophobic, cysteine-rich peptides.

L182 ANSWER 5 OF 25

MEDLINE on STN

ACCESSION NUMBER: DOCUMENT NUMBER:

2003095049 MEDLINE PubMed ID: 12605605

TITLE:

Detergent-assisted oxidative folding of

delta-conotoxins.

AUTHOR:

DeLa Cruz R; Whitby F G; Buczek O; Bulaj G

CORPORATE SOURCE:

Department of Biology, University of Utah, Salt Lake City,

Utah 84112, USA.

CONTRACT NUMBER:

GM 42494 (NIGMS)

PO 148677

SOURCE: journal of peptide research : official journal of the

American Peptide Society, (2003 Apr) 61 (4) 202-12.

Journal code: 9707067. ISSN: 1397-002X.

PUB. COUNTRY:

Denmark

DOCUMENT TYPE:

Journal; Article; (JOURNAL ARTICLE)

LANGUAGE:

English

FILE SEGMENT:

Priority Journals

folding of hydrophobic, cysteine-rich peptides.

ENTRY MONTH:

200311

ENTRY DATE:

Entered STN: 20030228

Last Updated on STN: 20031217

Entered Medline: 20031126

Conotoxins comprise a diverse group of disulfide-rich peptides AB found in venoms of predatory Conus species. The native conformation of these peptides is marginally stable in comparison with alternative conformations, often resulting in low folding yields. The oxidative folding of hydrophobic delta-conotoxins was found to produce less than 1% of the native peptide [Bulaj, G. et al. (2001) Biochemistry 40, 13201]. In order to identify factors that might improve folding yields, we screened a number of additives including water-soluble polymers, detergents and osmolytes for their ability to increase steady-state accumulation of the native deltaconotoxin PVIA. The presence of a non-ionic detergent Tween and low temperature appeared to be the most effective factors in improving the oxidative folding. detergent was also effective in promoting folding of other hydrophobic delta-conotoxins. Based on our findings, we discuss a possible mechanism for detergent-assisted folding and

the general applicability of this mechanism to facilitating the proper

L182 ANSWER 6 OF 25 SCISEARCH COPYRIGHT 2004 THOMSON ISI on STN

ACCESSION NUMBER: 2003:259701 SCISEARCH

THE GENUINE ARTICLE: 656MX

Detergent-assisted oxidative folding TITLE:

of delta-conotoxins

DeLa Cruz R; Whitby F G; Buczek O; Bulaj G (Reprint) AUTHOR:

Univ Utah, Dept Biol, Salt Lake City, UT 84112 USA CORPORATE SOURCE:

(Reprint); Univ Utah, Sch Med, Dept Biochem, Salt Lake

City, UT 84132 USA

USA COUNTRY OF AUTHOR:

SOURCE:

JOURNAL OF PEPTIDE RESEARCH, (APR 2002) Vol. 61, No. 4,

pp. 202-212.

Publisher: BLACKWELL MUNKSGAARD, 35 NORRE SOGADE, PO BOX

2148, DK-1016 COPENHAGEN, DENMARK.

ISSN: 1397-002X. Article; Journal

DOCUMENT TYPE: LANGUAGE:

English

46

REFERENCE COUNT:

\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*

Conotoxins comprise a diverse group of disulfide AB -rich peptides found in venoms of predatory Conus species. The native conformation of these peptides is marginally stable in comparison with

alternative conformations, often resulting in low folding

yields. The oxidative folding of hydrophobic delta-

conotoxins was found to produce less than 1 % of the native peptide [Bulaj, G. et al. (2001) Biochemistry 40, 13201]. In order to

identify factors that might improve folding yields, we screened a number of additives including water-soluble polymers, detergents and osmolytes for their ability to increase steady-state accumulation of

the native delta-conotoxin PVIA. The presence of a non -ionic detergent Tween and low temperature appeared to

be the most effective factors in improving the oxidative folding

. The detergent was also effective in promoting folding of other hydrophobic delta-conotoxins. Based on our findings, we discuss a possible mechanism for detergent-assisted

folding and the general applicability of this mechanism to facilitating the proper folding of hydrophobic, cysteine-rich peptides.

TOXCENTER COPYRIGHT 2004 ACS on STN L182 ANSWER 7 OF 25

ACCESSION NUMBER: 2003:76151 TOXCENTER Copyright 2004 ACS COPYRIGHT: DOCUMENT NUMBER: CA13912175022Z

TITLE: Detergent-assisted oxidative folding

of  $\delta$ - conotoxins

DeLa Cruz, R.; Whitby, F. G.; Buczek, O.; Bulaj, G. AUTHOR(S):

Department of Biology, University of Utah, Salt Lake City, CORPORATE SOURCE:

UT, 84112, USA.

Journal of Peptide Research, (2003) Vol. 61, No. 4, pp. SOURCE:

202-212.

CODEN: JPERFA. ISSN: 1397-002X.

UNITED STATES COUNTRY:

Journal DOCUMENT TYPE: FILE SEGMENT: CAPLUS

CAPLUS 2003:237390 OTHER SOURCE:

English LANGUAGE:

Entered STN: 20030401 ENTRY DATE:

Last Updated on STN: 20030916

Conotoxins comprise a diverse group of disulfide-rich peptides ABfound in venoms of predatory Conus species. The native conformation of these peptides is marginally stable in comparison with alternative conformations, often resulting in low folding yields. The oxidative folding of hydrophobic  $\delta$ - conotoxins was found to produce less than 1% of the native peptide [Bulaj, G. et al. (2001) Biochem. 40, 13201]. In order to identify factors that might improve

folding yields, the authors screened a number of additives including water-soluble polymers, detergents and osmolytes for their ability to increase steady-state accumulation of the native  $\delta$ conotoxin PVIA. The presence of a non-ionic detergent Tween and low temperature appeared to be the most effective factors in improving the oxidative folding. The detergent was also effective in promoting folding of other hydrophobic  $\delta$ - conotoxins. Based on our findings, the authors discuss a possible mechanism for detergent-assisted folding and the general applicability of this mechanism to facilitating the proper folding of hydrophobic, cysteine-rich peptides.

USPATFULL on STN L182 ANSWER 8 OF 25

ACCESSION NUMBER:

2004:31067 USPATFULL

TITLE:

Method of recovering a nucleic acid encoding a proteinaceous binding domain which binds a target

material

INVENTOR(S):

Ladner, Robert Charles, Ijamsville, MD, UNITED STATES Guterman, Sonia Kosow, Belmont, MA, UNITED STATES Roberts, Bruce Lindsay, Milford, MA, UNITED STATES Markland, William, Milford, MA, UNITED STATES Ley, Arthur Charles, Newton, MA, UNITED STATES Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.: US 2004023205 A1 20040205

US 2002-126544 A1 20020422 (10)

Continuation of Ser. No. US 1997-993776, filed on 18 Dec 1997, ABANDONED Continuation of Ser. No. US 1995-415922, filed on 3 Apr 1995, GRANTED, Pat. No. US 5837500 Continuation of Ser. No. US 1993-9319, filed on 26 Jan 1993, GRANTED, Pat. No. US 5403484 Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, GRANTED, Pat. No. US 5223409 Continuation-in-part of Ser. No. US

1990-487063, filed on 2 Mar 1990, ABANDONED

Continuation-in-part of Ser. No. US 1988-240160, filed

on 2 Sep 1988, ABANDONED

NUMBER DATE

PRIORITY INFORMATION:

WO 1989-US3731 19890901

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W.,

Washington, DC, 20001

NUMBER OF CLAIMS:

17 1

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

16 Drawing Page(s)

LINE COUNT:

15868

AB In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III

protein.

L182 ANSWER 9 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2004:7306 USPATFULL

TITLE: Nucleic acids, genetic constructs, and library of

nucleic acids encoding fusion proteins

INVENTOR(S): Ladner, Robert Charles, Ijamsville, MD, UNITED STATES

Guterman, Sonia Kosow, Belmont, MA, UNITED STATES Roberts, Bruce Lindsay, Milford, MA, UNITED STATES

Markland, William, Milford, MA, UNITED STATES Ley, Arthur Charles, Newton, MA, UNITED STATES

Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION:

US 2004005539 A1 20040108

APPLICATION INFO.:

US 2002-127028 A1 20020422 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1997-993776, filed on 18

Dec 1997, ABANDONED Continuation of Ser. No. US

1995-415922, filed on 3 Apr 1995, GRANTED, Pat. No. US 5837500 Continuation of Ser. No. US 1993-9319, filed on 26 Jan 1993, GRANTED, Pat. No. US 5403484 Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, GRANTED,

Pat. No. US 5223409 Continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990, ABANDONED

Continuation-in-part of Ser. No. US 1988-240160, filed

on 2 Sep 1988, ABANDONED

NUMBER DATE

PRIORITY INFORMATION:

WO 1989-US3731 19890901

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W.,

Washington, DC, 20001

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

22 1

NUMBER OF DRAWINGS:

16 Drawing Page(s)

LINE COUNT:

16057

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In order to obtain a novel binding protein against a chosen target, DNA AB molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 10 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2003:318635 USPATFULL

TITLE:

Novel nucleic acids and polypeptides

INVENTOR(S):

Tang, Y. Tom, San Jose, CA, UNITED STATES Yang, Yonghong, San Jose, CA, UNITED STATES

Wang, Zhiwei, Sunnyvale, CA, UNITED STATES Weng, Gezhi, Piedmont, CA, UNITED STATES Ma, Yunging, Santa Clara, CA, UNITED STATES

NUMBER KIND DATE US 2003224379 PATENT INFORMATION: A1 20031204 US 2002-243552 APPLICATION INFO.: A1 20020912 (10)

Continuation-in-part of Ser. No. WO 2000-US35017, filed RELATED APPLN. INFO.: on 22 Dec 2000, PENDING Continuation-in-part of Ser. No. US 2000-552317, filed on 25 Apr 2000, ABANDONED

Continuation-in-part of Ser. No. US 2000-488725, filed

on 21 Jan 2000, PENDING

NUMBER DATE PRIORITY INFORMATION: WO 2001-US2623 20010125 WO 2001-US3800 20010205 WO 2001-US4927 20010226 WO 2001-US4941 20010305 WO 2001-US8631 20010330 WO 2001-US8656 20010416 WO 2001-US14827 20010516 US 2001-322511P 20010913 (60)

Utility DOCUMENT TYPE: FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Elena Quertermous, 675 Almanor Avenue, Sunnyvale, CA,

94085

NUMBER OF CLAIMS: 26 EXEMPLARY CLAIM: 1 LINE COUNT: 13810

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides novel nucleic acids, novel polypeptide AB sequences encoded by these nucleic acids and uses thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 11 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2003:312289 USPATFULL

Directed evolution of novel binding proteins TITLE:

INVENTOR(S): Ladner, Robert Charles, Ijamsville, MD, UNITED STATES Guterman, Sonia Kosow, Belmont, MA, UNITED STATES Roberts, Bruce Lindsay, Milford, MA, UNITED STATES

Markland, William, Milford, MA, UNITED STATES Ley, Arthur Charles, Newton, MA, UNITED STATES

Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

NUMBER KIND DATE US 2003219886 A1 20031127 US 2001-896095 A1 20010629

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.:

(9) Continuation of Ser. No. US 1997-993776, filed on 18 Dec 1997, PENDING Continuation of Ser. No. US

1995-415922, filed on 3 Apr 1995, GRANTED, Pat. No. US 5837500 Continuation of Ser. No. US 1993-9319, filed on 26 Jan 1993, GRANTED, Pat. No. US 5403484 Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, GRANTED, Pat. No. US 5223409 Continuation-in-part of Ser. No. US

1990-487063, filed on 2 Mar 1990, ABANDONED

Continuation-in-part of Ser. No. US 1988-240160, filed

on 2 Sep 1988, ABANDONED

NUMBER DATE

PRIORITY INFORMATION: DOCUMENT TYPE:

WO 1989-US3731

19890901

Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W.,

Washington, DC, 20001

NUMBER OF CLAIMS: 100 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 16 Drawing Page(s)

LINE COUNT: 15529

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In order to obtain a novel binding protein against a chosen target, DNA AB molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 12 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2003:312125 USPATFULL

TITLE: Fusion proteins, modified filamentous bacteriophage,

and populations or libraries of same

INVENTOR(S): Ladner, Robert Charles, Ijamsville, MD, UNITED STATES

Guterman, Sonia Kosow, Belmont, MA, UNITED STATES Roberts, Bruce Lindsay, Milford, MA, UNITED STATES Markland, William, Milford, MA, UNITED STATES

Ley, Arthur Charles, Newton, MA, UNITED STATES

Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 2003219722 A1 20031127 US 2002-126685 A1 20020422 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1997-993776, filed on 18

Dec 1997, PENDING Continuation of Ser. No. US

1995-415922, filed on 3 Apr 1995, GRANTED, Pat. No. US 5837500 Continuation of Ser. No. US 1993-9319, filed on 26 Jan 1993, GRANTED, Pat. No. US 5403484 Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, GRANTED, Pat. No. US 5223409 Continuation-in-part of Ser. No. US

1990-487063, filed on 2 Mar 1990, ABANDONED

Continuation-in-part of Ser. No. US 1988-240160, filed

on 2 Sep 1988, ABANDONED

NUMBER DATE

PRIORITY INFORMATION:

LEGAL REPRESENTATIVE:

WO 1989-US3731 19890901

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W.,

Washington, DC, 20001

NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

R OF CLAIMS: 38

1

NUMBER OF DRAWINGS: 16 Drawing Page(s)

LINE COUNT: 16459

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB

In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 13 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2003:165862 USPATFULL

TITLE:

INVENTOR(S):

Directed evolution of novel binding proteins
Ladner, Robert Charles, Ijamsville, MD, UNITED STATES
Guterman, Sonia Kosow, Belmont, MA, UNITED STATES
Roberts, Bruce Lindsay, Milford, MA, UNITED STATES
Markland, William, Milford, MA, UNITED STATES
Ley, Arthur Charles, Newton, MA, UNITED STATES
Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.:

US 2003113717 A1 20030619

APPLICATION INFO.: US 2001-893878 A1 20010629 RELATED APPLN. INFO.: Continuation of Ser. No. US 1997-

.: Continuation of Ser. No. US 1997-993776, filed on 18

Dec 1997, PENDING Continuation of Ser. No. US

1995-415922, filed on 3 Apr 1995, PATENTED Continuation

(9)

of Ser. No. US 1993-9319, filed on 26 Jan 1993,

PATENTED Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, PATENTED Continuation-in-part of Ser. No.

US 1990-487063, filed on 2 Mar 1990, ABANDONED

Continuation-in-part of Ser. No. US 1988-240160, filed

on 2 Sep 1988, ABANDONED

NUMBER DATE

PRIORITY INFORMATION:

WO 1989-US3731 19890901

DOCUMENT TYPE: FILE SEGMENT:

Utility APPLICATION

LEGAL REPRESENTATIVE:

BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W.,

Washington, DC, 20001

NUMBER OF CLAIMS:

25 1

EXEMPLARY CLAIM:

16 Drawing Page(s)

NUMBER OF DRAWINGS: LINE COUNT:

15933

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB

In order to obtain a novel binding protein against a chosen target, DNA molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural-signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used

as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 14 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2002:273335 USPATFULL

TITLE: Agouti polynucleotide compositions and methods of use

INVENTOR(S): Woychik, Richard P., Orinda, CA, UNITED STATES
Bultman, Scott J., Lakewood, OH, UNITED STATES

Michaud, Edward J., UNITED STATES

NUMBER KIND DATE US 2002151463 PATENT INFORMATION: 20021017 **A**1 US 6514747 B2 20030204 APPLICATION INFO.: US 2001-781811 A1 20010212 (9) Division of Ser. No. US 1998-34088, filed on 3 Mar RELATED APPLN. INFO.: 1998, GRANTED, Pat. No. US 6310034 Continuation-in-part of Ser. No. US 1993-64385, filed on 21 May 1993, ABANDONED

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: GREGORY A. NELSON, AKERMAN, SENTERFITT AND EIDSON,

P.A., 222 LAKEVIEW AVENUE, SUITE 400, P.O.BOX 3188,

WEST PALM BEACH, FL, 33402-3188

NUMBER OF CLAIMS: 50 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 41 Drawing Page(s)

LINE COUNT: 11146

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are methods and compositions comprising novel agouti polypeptides and the polynucleotides which encode them. Also disclosed are DNA segments encoding these proteins derived from human and murine cell lines, and the use of these polynucleotides and polypeptides in a variety of diagnostic and therapeutic applications. Methods, compositions, kits, and devices are also provided for identifying compounds which are inhibitors of agouti activity, and for altering fatty acid synthetase activity and intracellular calcium levels in transformed cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 15 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2002:272761 USPATFULL

TITLE: Directed evolution of novel binding proteins

INVENTOR(S): Ladner, Robert Charles, Ijamsville, MD, UNITED STATES

Guterman, Sonia Kosow, Belmont, MA, UNITED STATES
Roberts, Bruce Lindsay, Milford, MA, UNITED STATES
Markland, William, Milford, MA, UNITED STATES
Ley, Arthur Charles, Newton, MA, UNITED STATES

Kent, Rachel Baribault, Boxborough, MA, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2002150881 A1 20021017 APPLICATION INFO.: US 2001-781988 A1 20010214 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1998-192067, filed on 16

Nov 1998, ABANDONED Continuation of Ser. No. US

1995-415922, filed on 3 Apr 1995, PATENTED Continuation

of Ser. No. US 1993-9319, filed on 26 Jan 1993,

PATENTED Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, PATENTED Continuation-in-part of Ser. No.

US 1990-487063, filed on 2 Mar 1990, ABANDONED

Continuation-in-part of Ser. No. US 1988-240160, filed

on 2 Sep 1988, ABANDONED

NUMBER DATE

PRIORITY INFORMATION:

WO 1989-US3731 19890901

DOCUMENT TYPE:

Utility

FILE SEGMENT:

APPLICATION

LEGAL REPRESENTATIVE:

BROWDY AND NEIMARK, P.L.L.C., 624 Ninth Street, N.W.,

Washington, DC, 20001

NUMBER OF CLAIMS:

18

EXEMPLARY CLAIM: NUMBER OF DRAWINGS:

16 Drawing Page(s)

LINE COUNT:

15696

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In order to obtain a novel binding protein against a chosen target, DNA AB molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 16 OF 25 USPATFULL on STN

ACCESSION NUMBER:

2001:191105 USPATFULL

TITLE:

Agouti polypeptide compositions

INVENTOR(S):

Woychik, Richard P., Orinda, CA, United States Bultman, Scott J., Lakewood, OH, United States Michaud, Edward J., Kingston, TN, United States

PATENT ASSIGNEE(S):

UT-Battelle, LLC, Oak Ridge, TN, United States (U.S.

corporation)

NUMBER KIND DATE

PATENT INFORMATION:

US 6310034

B1 20011030

APPLICATION INFO.:

US 1998-34088

(9) 19980303

RELATED APPLN. INFO.:

Continuation-in-part of Ser. No. US 1993-64385, filed

on 21 May 1993, now abandoned

DOCUMENT TYPE:

Utility GRANTED

FILE SEGMENT: PRIMARY EXAMINER:

Kammerer, Elyabik C.

LEGAL REPRESENTATIVE:

Williams, Morgan & Amerson

NUMBER OF CLAIMS:

34

EXEMPLARY CLAIM:

1

NUMBER OF DRAWINGS:

83 Drawing Figure(s); 41 Drawing Page(s)

LINE COUNT:

10935

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are methods and compositions comprising novel agouti ABpolypeptides and the polynucleotides which encode them. Also disclosed are DNA segments encoding these proteins derived from human and murine cell lines, and the use of these polynucleotides and polypeptides in a variety of diagnostic and therapeutic applications. Methods, compositions, kits, and devices are also provided for identifying compounds which are inhibitors of agouti activity, and for altering fatty acid synthetase activity and intracellular calcium levels in transformed cells.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 17 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2000:109565 USPATFULL

Peptide library and screening method TITLE:

Hart, Charles P., Mountain View, CA, United States INVENTOR(S):

Affymax Technologies N.V., Curaco, Netherlands PATENT ASSIGNEE(S):

(non-U.S. corporation)

NUMBER KIND DATE

US 6107059 20000822 US 1992-876288 19920429 (7) PATENT INFORMATION: APPLICATION INFO.:

DOCUMENT TYPE: Utility Granted FILE SEGMENT:

Campell, Bruce R. PRIMARY EXAMINER:

LEGAL REPRESENTATIVE: Townsend & Townsend & Crew

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

10 Drawing Figure(s); 12 Drawing Page(s) NUMBER OF DRAWINGS:

LINE COUNT: 2405

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A random peptide library constructed by transforming host cells with a AB collection of recombinant vectors that encode a fusion protein comprised of a carrier protein fused to a random peptide through a proteolytic cleavage site can be used to identify ligands that bind to a receptor. The screening method results in the formation of a complex comprising the fusion protein bound to a receptor through the random peptide ligand, and the random peptide can easily be identified and analyzed by virtue of the carrier protein and associated proteolytic cleavage site.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 18 OF 25 USPATFULL on STN

ACCESSION NUMBER: 2000:77196 USPATFULL

TITLE: ShK toxin compositions and methods of use

Kem, William R., Gainesville, FL, United States INVENTOR(S):

Pennington, Michael W., Cherry Hill, NJ, United States

Norton, Raymond S., Ivanhoe, Australia

Chandy, K. George, Laguna Beach, CA, United States

Kalman, Katalin, Irvine, CA, United States

PATENT ASSIGNEE(S): The University of Florida, Gainesville, FL, United

States (U.S. corporation)

Bachem Bioscience, Ing., King of Prussia, PA, United

States (U.S. corporation)

Biomolecular Research Institute, Parkville, Australia

(non-U.S. corporation)

Regents of the University of California, Oakland, CA,

United States (U.S. corporation)

NUMBER KIND DATE US 6077680 PATENT INFORMATION: 20000620 APPLICATION INFO.: US 1997-980858 19971126 (8)

NUMBER DATE

PRIORITY INFORMATION: US 1996-59126P 19961127 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Carlson, Karen Cochrane
ASSISTANT EXAMINER: Bugaisky, Gabriele E.

LEGAL REPRESENTATIVE: Williams, Morgan, & Amerson

NUMBER OF CLAIMS: 42 EXEMPLARY CLAIM: 4

NUMBER OF DRAWINGS: 40 Drawing Figure(s); 25 Drawing Page(s)

LINE COUNT: 5831

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are methods and compositions comprising DNA segments, and proteins derived from sea anemone species. More particularly, it concerns the novel ShK toxin, ShK toxin analogs, chemically-modified toxin analogs, and nucleic acid segments encoding the ShK toxin from Stichodactyla helianthus. Various methods for making and using these DNA segments, DNA segments encoding synthetically-modified ShK toxins, and native and synthetic ShK peptides are disclosed, such as, for example, the use of DNA segments as diagnostic probes and templates for protein production, and the use of proteins, fusion protein carriers and peptides in various immunological and diagnostic applications.

## CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 19 OF 25 USPATFULL on STN

ACCESSION NUMBER: 1999:36903 USPATFULL

TITLE: Method of obtaining small conformationally rigid

conopeptides

INVENTOR(S): Olivera, Baldomero M., Salt Lake City, UT, United

States

Hillyard, David R., Holiday, UT, United States

Myers, Richard A., Salt Lake City, UT, United States

Scott, Jamie K., Columbia, MO, United States Smith, George P., Columbia, MO, United States

PATENT ASSIGNEE(S): University of Utah, Salt Lake City, UT, United States

(U.S. corporation)

The Curators of the University of Missouri, Columbia,

MO, United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5885780 19990323 APPLICATION INFO.: US 1991-733095 19910719 (7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted

PRIMARY EXAMINER: Scheiner, Laurie

LEGAL REPRESENTATIVE: Thorpe, North & Western, L.L.P.

NUMBER OF CLAIMS: 21 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 9 Drawing Figure(s); 3 Drawing Page(s)

LINE COUNT: 1170

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A method for separating, identifying and purifying small, conotoxin-like ABrigidly conformed peptides ("conopeptides") containing multiple Cys residues comprises forming a conceffector library, each member of which has a nucleic acid encoding a potential conopeptide sequence. The conceffectors are expressed such that they are exposed on the surface of a bacteriophage. These bacteriophage are screened for binding to a target protein molecule, and receptors in particular, to separate and bind phage having affinity for the target protein. Reiterative screening, if required, is used to enrich and yield a phage carrying the bound conopeptide of the desired specificity and affinity. The enriched phage are then subjected to DNA sequencing to determine the conopeptide sequence including the position of the Cys residues. The chemical structure information gathered, coupled with the binding specificities to the target protein, permits the genetic or synthetic preparation of a large variety of small rigidly conformed disulfide rich peptides as pharmaceutical, pesticidal or other bioactive candidates.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

USPATFULL on STN L182 ANSWER 20 OF 25

ACCESSION NUMBER:

97:1540 USPATFULL

TITLE:

Omega-conotoxin peptides

INVENTOR(S):

Olivera, Baldomero M., Salt Lake City, UT, United

States

Hillyard, David R., Salt Lake City, UT, United States Imperial, Julita S., Salt Lake City, UT, United States

Monje, Virginia D., Quezon City, Philippines

PATENT ASSIGNEE(S):

The University of Utah, Salt Lake City, UT, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION:

US 5591821

19970107

APPLICATION INFO.:

US 1993-92215

19930716 (8)

DOCUMENT TYPE:

Utility Granted

FILE SEGMENT: PRIMARY EXAMINER:

Weimar, Elizabeth C.

ASSISTANT EXAMINER:

Marshall, S. G.

LEGAL REPRESENTATIVE:

Venable, Baetjer, Howard & Civiletti, LLP

NUMBER OF CLAIMS:

20

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS:

9 Drawing Figure(s); 3 Drawing Page(s)

LINE COUNT:

1557

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention is directed to  $\omega$ -conotoxin peptides having AB 24-30 amino acids, six cysteines which form disulfide bonds between the first and fourth, second and fifth, and third and sixth cysteines, respectively, and an internal sequence of Cys-Arg-Lys-Thr-Xaa.sub.1 -Tyr-Xaa.sub.2 -Cys-Cys-Ser-Gly-Ser-Cys (SEQ ID NO:1). The invention is further directed to  $\omega$ -conotoxin peptides of the generic formula Cys-Xaa.sub.1 -Gly-Xaa.sub.2 -Gly-Ala-Xaa.sub.3 -Cys-Arg-Lys-Thr-Xaa.sub.4 -Tyr-Xaa.sub.5 -Cys-Cys-Ser-Gly-Ser-Cys-Xaa.sub.6 -Arg-Gly-Xaa.sub.7 -Cys (SEQ ID NO:2). Preferably, the C-terminus is amidated. These peptides also contain three disulfide bonds. Examples of  $\omega$ -conotoxin peptides within the generic formula are MVIIC having the formula Cys-Cys-Gly-Lys-Gly-Ala-Xaa.sub.1 -Cys-Arg-Lys-Thr-Xaa.sub.2 -Tyr-Asp-Cys-Cys-Ser-Gly-Ser-Cys-Gly-Arg-Arg-Gly-Lys-Cys (SEQ ID NO:3), wherein Xaa is preferably Pro or Hyp (4-hydroxyproline) and Xaa.sub.2 is preferably Met or Nle (norleucine) and wherein preferably the C-terminus is amidated, and MVIID having the formula Cys-Gln-Gly-Arg-Gly-Ala-Ser-Cys-Arg-Lys-Thr-Xaa-Tyr-Asn-Cys-Cys-Ser-Gly-Ser-Cys-Asn-Arg-Gly-Arg-Cys (SEQ ID NO:4), wherein Xaa is preferably Met or Nle (norleucine), and wherein preferably the C-terminus is amidated. These peptides target the P-like subtypes of Ca.sup.2+ channels as well as the N-type Ca.sup.2+

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 21 OF 25 USPATFULL on STN

ACCESSION NUMBER:

channels.

96:101466 USPATFULL

TITLE: INVENTOR(S): Directed evolution of novel binding proteins Ladner, Robert C., Ijamsville, MD, United States Guterman, Sonia K., Belmont, MA, United States Roberts, Bruce L., Milford, MA, United States Markland, William, Milford, MA, United States Ley, Arthur C., Newton, MA, United States Kent, Rachel B., Boxborough, MA, United States

PATENT ASSIGNEE(S):

Protein Engineering Corporation, Cambridge, MA, United

States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 5571698 19961105 APPLICATION INFO.: US 1993-57667 19930618 (8)

DISCLAIMER DATE: 20100629

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-664989, filed on 1 Mar

1991, now patented, Pat. No. US 5223409 which is a continuation-in-part of Ser. No. US 1990-487063, filed

on 2 Mar 1990, now abandoned which is a

continuation-in-part of Ser. No. US 1988-240160, filed

on 2 Sep 1988, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Ulm, John
LEGAL REPRESENTATIVE: Cooper, Iver P.

NUMBER OF CLAIMS: 83 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 16 Drawing Figure(s); 16 Drawing Page(s)

LINE COUNT: 15323

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In order to obtain a novel binding protein against a chosen target, DNA AB molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 22 OF 25 USPATFULL on STN

ACCESSION NUMBER: 95:62572 USPATFULL

TITLE: Peptide library and screening systems

INVENTOR(S): Dower, William J., Menlo Park, CA, United States

Cwirla, Steven E., Palo Alto, CA, United States Barrett, Ronald W., Sunnyvale, CA, United States

PATENT ASSIGNEE(S): Affymax Technologies N.V., Netherlands (non-U.S.

corporation)

APPLICATION INFO.: US 1991-718577 19910620 (7)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1990-541108, filed

on 20 Jun 1990

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Scheiner, Toni R. ASSISTANT EXAMINER: Wortman, Donna C.

LEGAL REPRESENTATIVE: Townsend and Townsend Khourie and Crew

NUMBER OF CLAIMS: 12 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 10 Drawing Figure(s); 7 Drawing Page(s)

LINE COUNT: 1739

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Peptides which bind to selected receptors are identified by screening libraries which encode a random or controlled collection of amino acids. Peptides encoded by the libraries are expressed as fusion proteins of

bacteriophage coat proteins, and bacteriophage are then screened against the receptors of interest. Peptides having a wide variety of uses, such as therapeutic or diagnostic reagents, may thus be identified without any prior information on the structure of the expected ligand or receptor.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 23 OF 25 USPATFULL on STN

ACCESSION NUMBER: 95:29292 USPATFULL

TITLE: Viruses expressing chimeric binding proteins
INVENTOR(S): Ladner, Robert C., Ijamsville, MD, United States
Guterman, Sonia K., Belmont, MA, United States
Roberts, Bruce L., Milford, MA, United States
Markland, William, Milford, MA, United States

Ley, Arthur C., Newton, MA, United States Kent, Rachel B., Boxborough, MA, United States

PATENT ASSIGNEE(S): Protein Engineering Corporation, Cambridge, MA, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5403484 19950404 APPLICATION INFO.: US 1993-9319 19930126 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1991-664989, filed on 1 Mar 1991, now patented, Pat. No. US 5223409 which is a

continuation-in-part of Ser. No. US 1990-487063, filed on 2 Mar 1990, now abandoned which is a

continuation-in-part of Ser. No. US 1988-240160, filed

on 2 Sep 1988, now abandoned

NUMBER DATE

PRIORITY INFORMATION: WO 1989-3731 19890901

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Hill, Jr., Robert J.

ASSISTANT EXAMINER: Ulm, John D. LEGAL REPRESENTATIVE: Cooper, Iver P.

NUMBER OF CLAIMS: 49
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 16 Drawing Figure(s); 16 Drawing Page(s)

LINE COUNT: 14368

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In order to obtain a novel binding protein against a chosen target, DNA AB molecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L182 ANSWER 24 OF 25 USPATFULL on STN ACCESSION NUMBER: 93:52487 USPATFULL

TITLE:

Directed evolution of novel binding proteins Ladner, Robert C., Ijamsville, MD, United States INVENTOR(S): Guterman, Sonia K., Belmont, MA, United States

Roberts, Bruce L., Milford, MA, United States Markland, William, Milford, MA, United States Ley, Arthur C., Newton, MA, United States

Kent, Rachel B., Boxborough, MA, United States

Protein Engineering Corp., Cambridge, MA, United States PATENT ASSIGNEE(S):

(U.S. corporation)

KIND NUMBER DATE

US 5223409 PATENT INFORMATION: 19930629 US 1991-664989 APPLICATION INFO.: 19910301 (7)

Continuation-in-part of Ser. No. US 1990-487063, filed RELATED APPLN. INFO.:

> on 2 Mar 1990, now abandoned And a continuation-in-part of Ser. No. US 1988-240160, filed on 2 Sep 1988, now

abandoned

Utility DOCUMENT TYPE: Granted FILE SEGMENT:

Hill, Jr., Robert J. PRIMARY EXAMINER:

Ulm, John D. ASSISTANT EXAMINER: LEGAL REPRESENTATIVE: Cooper, Iver P.

66 NUMBER OF CLAIMS: EXEMPLARY CLAIM:

16 Drawing Figure(s); 16 Drawing Page(s) NUMBER OF DRAWINGS:

15410 LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

In order to obtain a novel binding protein against a chosen target, DNA ABmolecules, each encoding a protein comprising one of a family of similar potential binding domains and a structural signal calling for the display of the protein on the outer surface of a chosen bacterial cell, bacterial spore or phage (genetic package) are introduced into a genetic package. The protein is expressed and the potential binding domain is displayed on the outer surface of the package. The cells or viruses bearing the binding domains which recognize the target molecule are isolated and amplified. The successful binding domains are then characterized. One or more of these successful binding domains is used as a model for the design of a new family of potential binding domains, and the process is repeated until a novel binding domain having a desired affinity for the target molecule is obtained. In one embodiment, the first family of potential binding domains is related to bovine pancreatic trypsin inhibitor, the genetic package is M13 phage, and the protein includes the outer surface transport signal of the M13 gene III protein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

USPAT2 on STN L182 ANSWER 25 OF 25

ACCESSION NUMBER: 2002:273335 USPAT2

TITLE: Agouti polynucleotide compositions and methods of use

INVENTOR(S): Woychik, Richard P., Orinda, CA, United States Bultman, Scott J., Lakewood, OH, United States Michaud, Edward J., Kingston, TN, United States

UT-Battelle, LLC, Oak Ridge, TN, United States (U.S. PATENT ASSIGNEE(S):

corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6514747 B2 20030204 APPLICATION INFO.: US 2001-781811 20010212 (9)

Division of Ser. No. US 1998-34088, filed on 3 Mar RELATED APPLN. INFO.: 1998, now patented, Pat. No. US 6310034, issued on 30

Oct 2001 Continuation-in-part of Ser. No. US

1993-64385, filed on 21 May 1993, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: Kemmerer, Elizabeth

LEGAL REPRESENTATIVE: Akerman, Senterfitt & Eidson, P.A.

NUMBER OF CLAIMS: 51
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 83 Drawing Figure(s); 41 Drawing Page(s)

LINE COUNT: 11264

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Disclosed are methods and compositions comprising novel agouti polypeptides and the polynucleotides which encode them. Also disclosed are DNA segments encoding these proteins derived from human and murine cell lines, and the use of these polynucleotides and polypeptides in a variety of diagnostic and therapeutic applications. Methods, compositions, kits, and devices are also provided for identifying compounds which are inhibitors of agouti activity, and for altering fatty acid synthetase activity and intracellular calcium levels in transformed cells.

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